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REFERENCES

- ALI, SALIM & RIPLEY, S. DILLON (1972-73): Handbook of the Birds of India and Pakistan, Vol. 5 (Corvidae) 1972 and Vol. 9 (Wagtails) 1973. Oxford University Press, Bombay.
- HUE F. & ETCHECOPER, R. D. (1970): Les Oiseaux due Procheoet du Moyen. N. Bouble & Cie. Paris.
- PALUDAN, KNUD (1959): Birds of Afghanistan. *Vidensk Medd. Dansk Naturh. For* Vol. 122.
- STUART BAKER, E. C. (1922): The Fauna of British India, Birds. Vol. 1. Taylor & Francis, London.
- VAURIE, CHARLES (1959): The Birds of the Palaearctic Fauna. H. F. & G. Witherby Ltd., London.
- WHISTLER, HUGH (1930): The Birds of the Rawal District, N. W. India. *Ibis.*, pp. 67-119.

10. NOTES ON THE STRIATED BABBLER *TURDOIDES EARLEI* (BLYTH) NEAR DELHI

During 1973 and 1974 intermittent observations were made on a population of Striated Babblers *Turdoides earlei* in an area of reed-swamp (*Typha*) close to the Yamuna canal, south of Delhi. The area was visited on eleven occasions during February to May 1973 and twice in February and March 1974. The species was quite common in the vicinity of reed beds and also foraged frequently in nearby water meadows and arable land. Several groups were seen in January, in an adjacent area, feeding on dry fields and along bunds, but the species was not recorded in this habitat during the breeding season.

Four groups of Striated Babblers were located in 1973 within an area estimated as 0.24 km² in extent. Three groups were counted accurately and included eight, nine and ten birds; the fourth was estimated as containing five birds. The total population was therefore estimated as 32 birds and the density 133 birds

per km.² The groups were not counted accurately in 1974, but four groups were agani present in the same area.

Nine nests were found in 1973 and two in 1974. Nest sites were of two types; either 1-2 m above the ground in a small palm tree (3 nests), tucked in at the base of the leaves, or 20-50 cm up in a dense clump of reeds (8 nests). The observed laying dates for first eggs were 27 February, 5 March and 9 April and two complete clutches were both of two eggs. Only two of the nests located in 1973 succeeded in fledging young and both of these were situated in reeds.

Because none of the birds were marked, it was not possible to tell how many group members participated in feeding the nestlings, but at both nests observed more than two birds took part. At one nest, containing young 5-7 days old, at least six adults were seen 'queuing' to deliver food to the nestlings, out

of a group of nine birds and it therefore seems likely that, as in the Jungle Babbler (Andrews & Naik 1970) all group members take some part in feeding the young. At both of the nests observed with nestlings adults took turns at maintaining a 'sentinel' watch close to the nest, the sentinel perching on a tall reed within a few metres of the nest. This position was swapped regularly after each bird had fed the nestlings.

Groups observed outside the breeding season usually fed together within a radius of 20-30 m. Some seen in January foraging in dry fields sometimes mixed with groups of Common Babblers *Turdoides caudatus* with which there was no obvious interaction. During the breeding season, however, birds were often seen foraging singly or in small parties and this also applied to members of a group which was feeding nestlings. Birds leaving the nest after bringing food would fly off in different directions and although none of the birds were marked it was clear that members of the group were feeding simultaneously over a wide area, constituting a large proportion of the group's home range.

During the early part of the breeding season, in February and March, one member of a

group frequently gave a loud call "chirrup-ee, chirrup-ee-ee...", perched prominently on top of a tall reed. This usually continued for several minutes, being repeated after a short pause and similar calls from birds in neighbouring territories could sometimes be heard simultaneously. It seems likely that this call functioned as a territorial advertisement and if so it contrasts with the territorial calls of other species of *Turdoides* (*T. striatus*, *T. malcolmi*, *T. subrufous*, *T. affinis*) which are normally given by several group members in chorus (Gaston 1976).

Allo-feeding was observed several times in February. On each occasion the food was presented to a bird perched up on a reed stem apparently undertaking sentinel duty, by a bird which flew up to present the food and then returned to feed on the ground. Allo-feeding is a common occurrence among members of Arabian Babbler groups (Amotz Zahavi, pers. comm.), where presentations are also usually made to a sentinel. Zahavi considers that this behaviour plays a role in the communication of dominance status, but observations on this behaviour in the Striated Babbler were insufficient to provide evidence on this hypothesis.

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REFERENCES

ANDREWS, M. I. AND NAIK, R. M. (1970): The biology of the Jungle Babbler. *Pavo* 8: 1-34.
GASTON, A. J. (1976): Factors affecting the evo-

lution of group territories in babblers. (*Turdoides*) and Long-tailed Tits. D. Phil. thesis, Oxford University.